

Fig. 1

10 - Starting ceramic consisting of
 base ceramic, for example
 additives, for example
 sacrificial phase, for example
 primary hard material phase, for example
 20 - Edge area or edge layer, for example

Fig. 3

A - Powder compound
 B - Powder processing
 Attritor grinding 7 h, 700 rpm, in acetone, X-TZP grinding balls
 C - Powder conditioning
 Drying, screening
 D - Green body production
 Pressing uniaxial
 cold isostatic
 E - Reaction sintering
 vacuum, after Argon rinsing
 F - Hard machining
 grinding
 G - High-temperature isostatic pressing
 H - Cutting plate

Fig. 4

Powder processing
 A Powder compound
 B Attritor grinding
 Acetone, grinding balls, container
 C Drying/screening
 D Green body manufacturing

uniaxial pressing
cold isostatic pressing
E Reaction sintering
vacuum
pores
F Hard machining
G High-temperature isostatic pressing argon
H Cutting plate

Fig. 5

Junction area
Basic structure

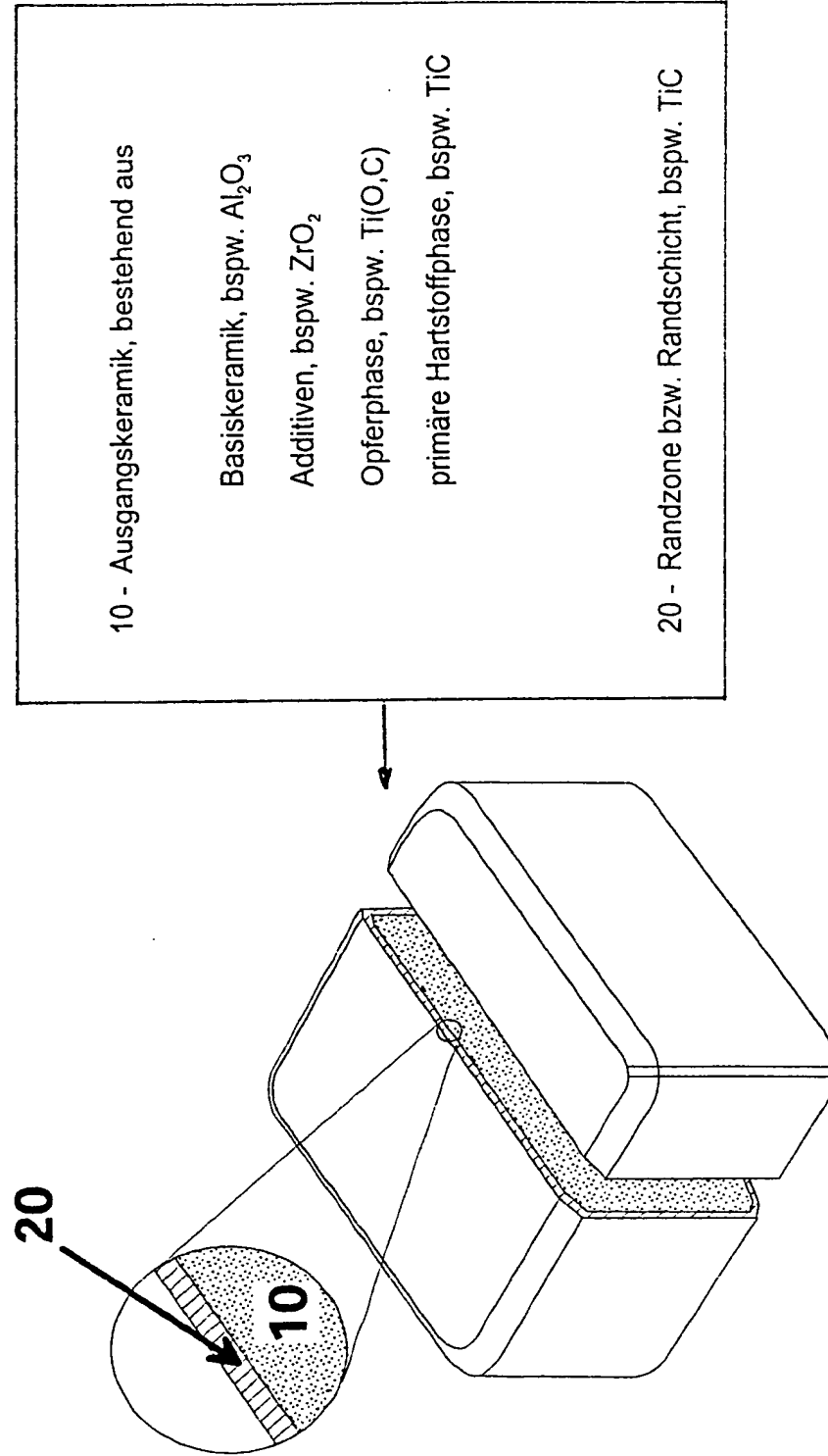
Fig. 6

Scanning electron microscope photos
Element concentration

Fig. 7

Cutting time
Width of wear land
Travel of the cutting tool
sintered
reference - high-temperature pressed
Fractures
Cutting ceramic according to the invention
Cutting speed
Cutting depth
Forward feed

Fig. 1



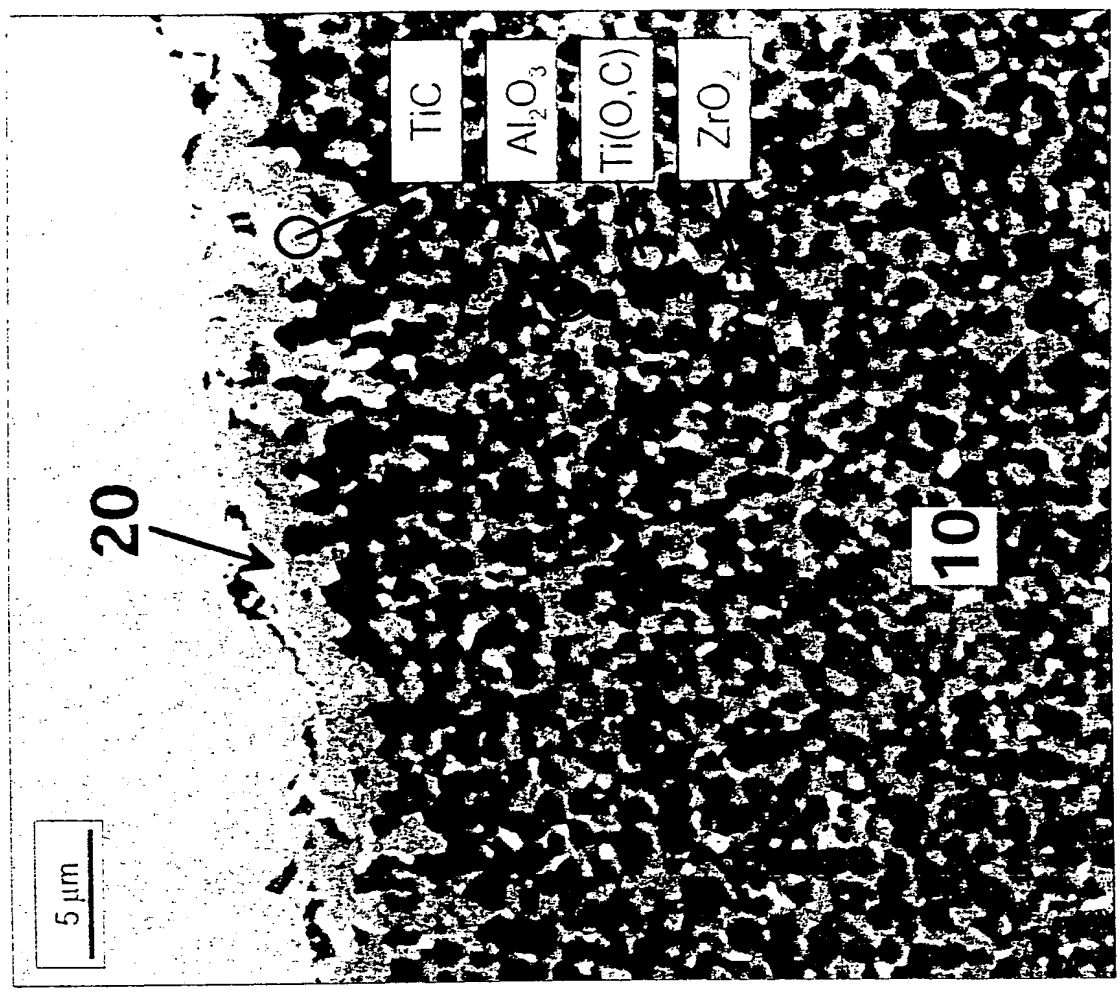


Fig. 2

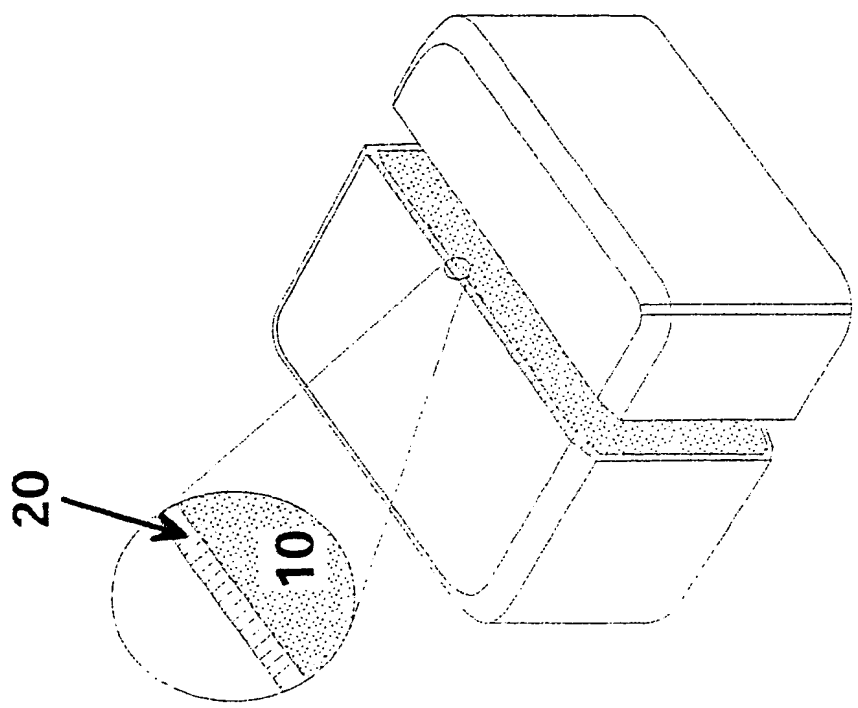
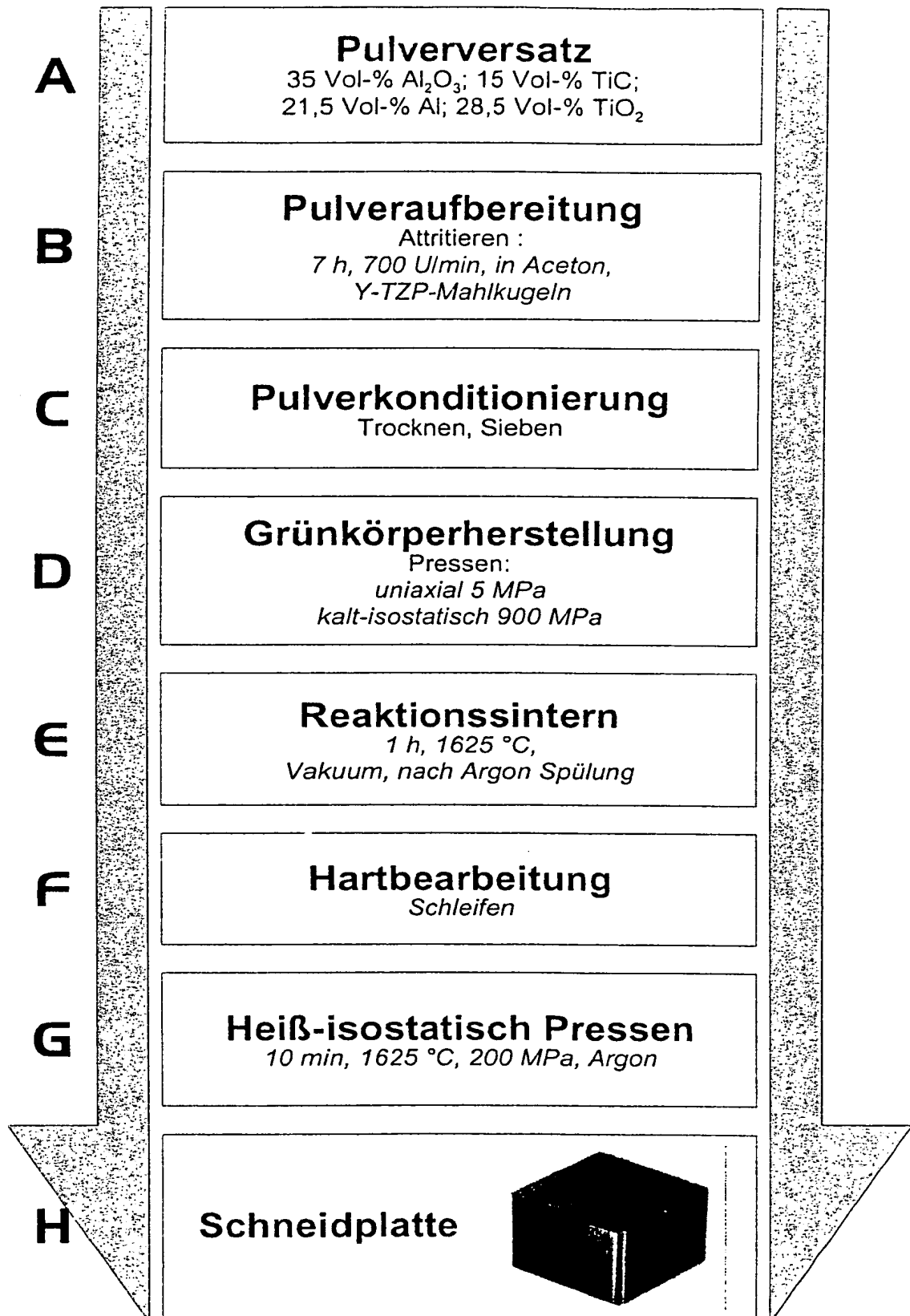


Fig. 3



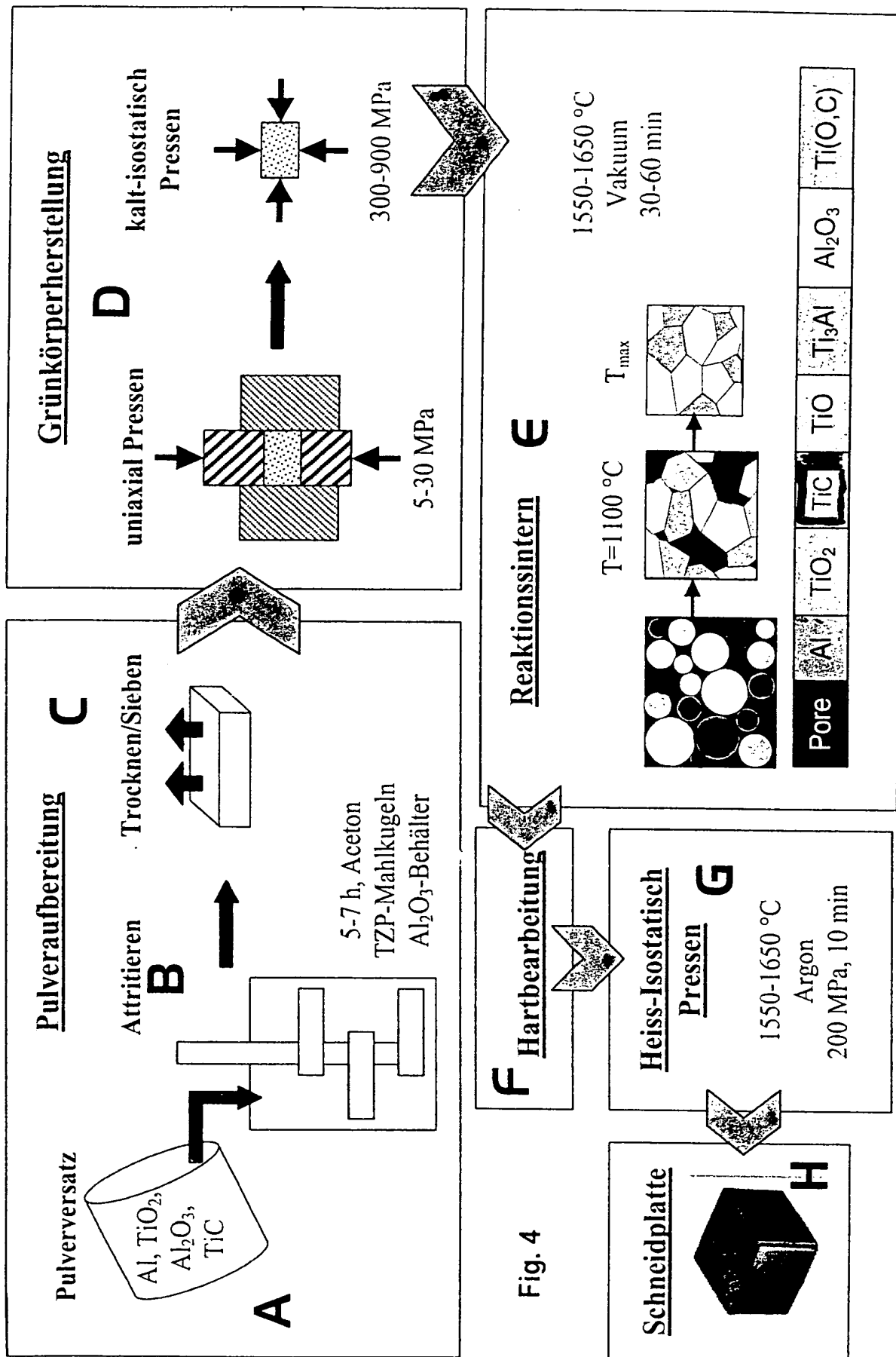
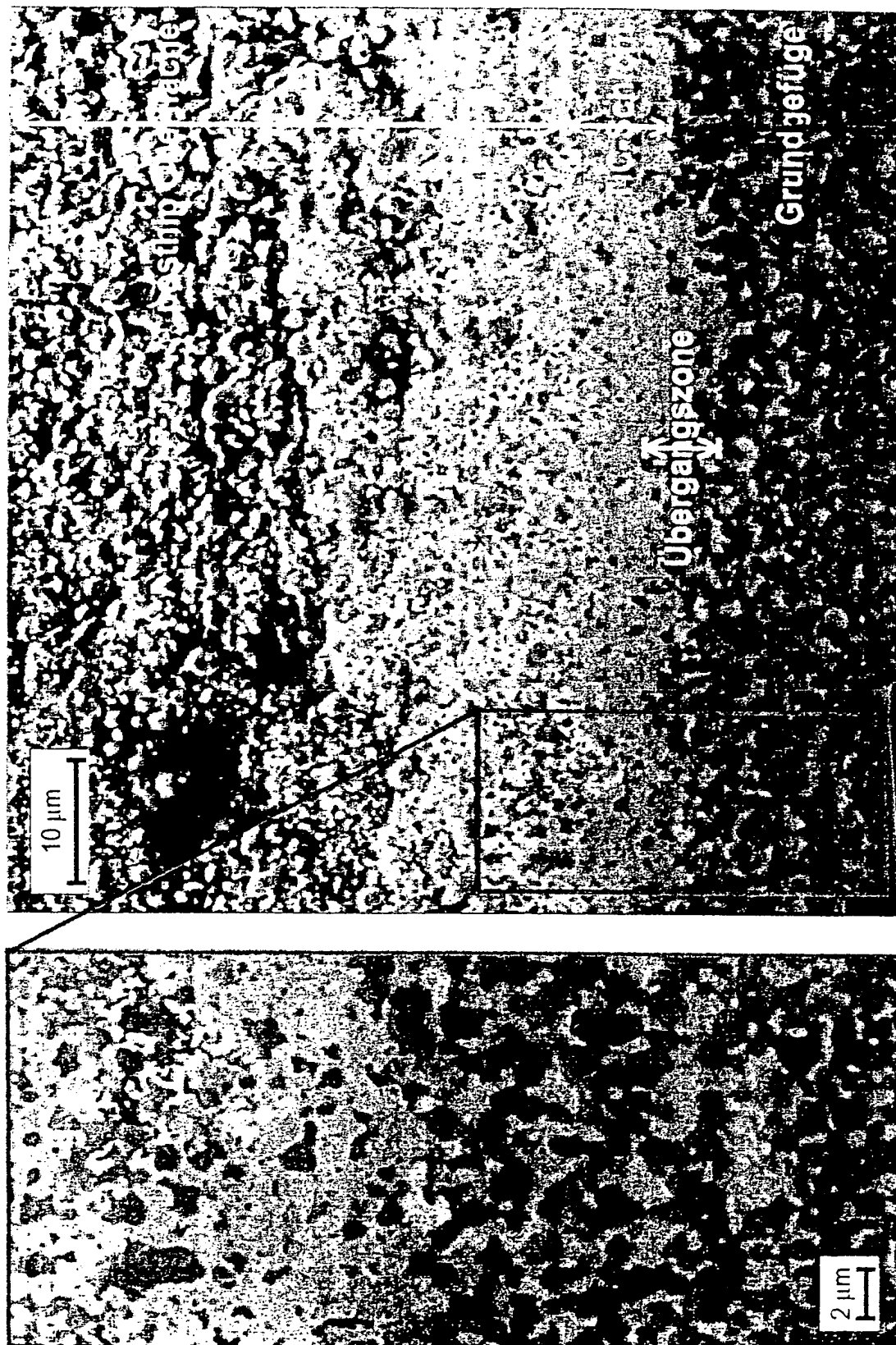


Fig. 4

Fig. 5



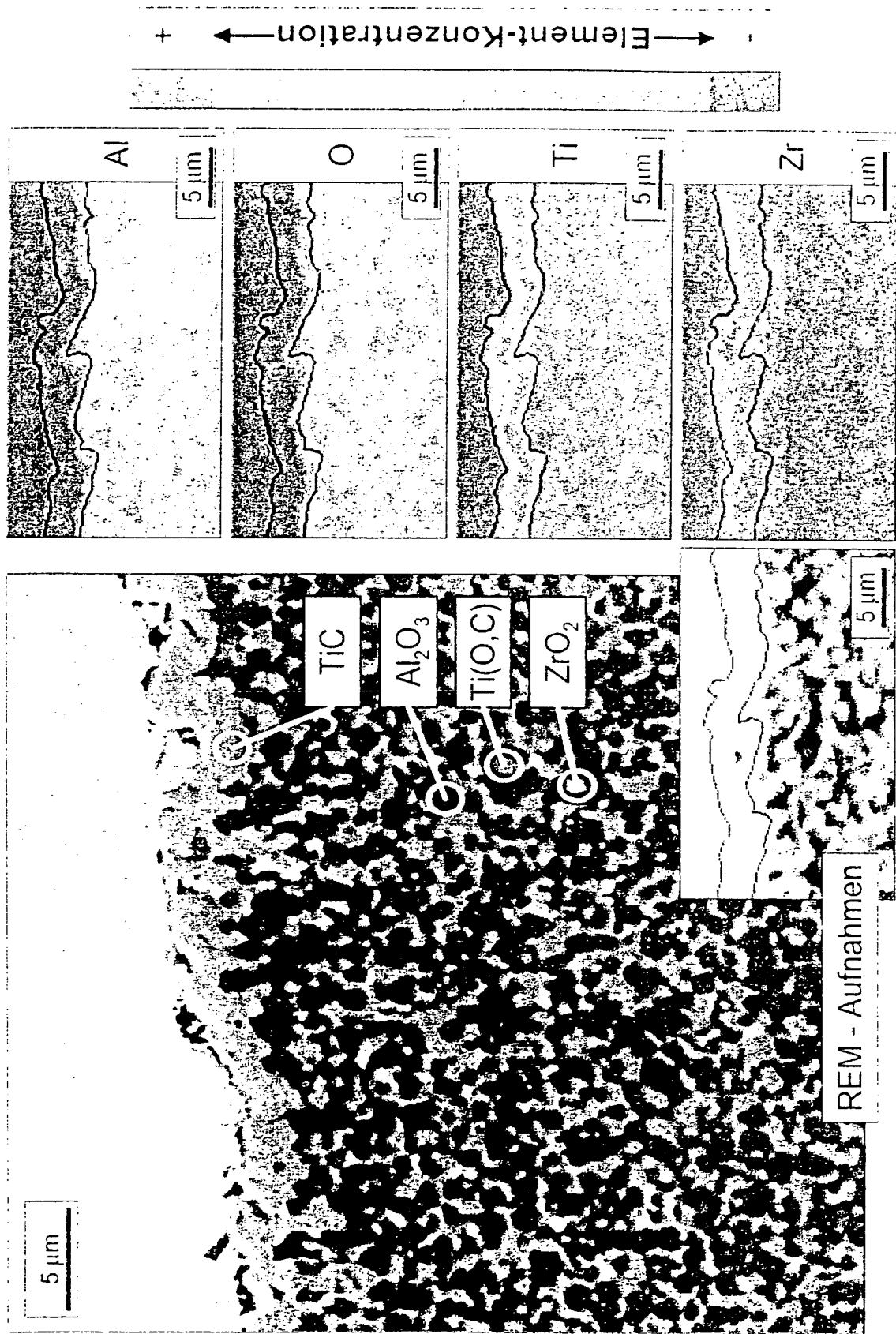


Fig. 7

